



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,041	12/30/2004	Dae-Min Shim	5062-5PUS	9849

27799 7590 08/02/2006

COHEN, PONTANI, LIEBERMAN & PAVANE  
551 FIFTH AVENUE  
SUITE 1210  
NEW YORK, NY 10176

EXAMINER
----------

NGUYEN, DINH Q

ART UNIT	PAPER NUMBER
----------	--------------

3752

DATE MAILED: 08/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/520,041	Applicant(s) SHIM, DAE-MIN	
	Examiner Dinh Q. Nguyen	Art Unit 3752	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 May 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 10-12, 14, 15, 17, 18 and 20 is/are rejected.
- 7) ☐ Claim(s) 2-9, 13, 16 and 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>02/06, 05/06, 06/06 &amp; 2/17/06, 2-21-06</u>                            | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 10-12, 14, 15, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Kikuchi et al (U.S. Publication No. 2003/0196821).

Kikuchi et al discloses a sprinkler head comprising: a first housing 14, a second housing 34, a deflector 36 adhered to the first housing via struts 42, a locking unit 26, a plurality of heat collecting plates 50, a heat responding unit 32 with fuse metal 48, and a head cover 60 with a plate portion 62b and a couple portion 62a.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 10, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kubo in view of Polan (U.S. Patent No. 4,926,946).

Kubo discloses a sprinkler head comprising: a first housing 1, a second housing 2, a deflector 5 with a valve cap 4 for sealing the first housing 1, a locking unit 3/4/7, a heat collecting plate 16, a heat responding unit 13/14 with a fuse metal 17, the heat

collecting plate 16 also acting as a head cover and in direct contact with fusible material 17 via cylinder 13 (see figure 4), and a tooling hole 18. Kubo does not teach a plurality of heat collecting plates. However, Polan discloses a sprinkler head having a first housing 24, a second housing 50, a heat responding unit 36, a plurality of heat collecting plates, and a head cover 14. Therefore, it would have been obvious to one having ordinary skill in the art to have provided the device of Kubo with plurality of heat collecting plates as suggested by Polan. Doing so would provide an effective temperature response mechanism for a sprinkler device.

5. Claims 11, 12, 14, 15, 17, 18 rejected under 35 U.S.C. 103(a) as being unpatentable over Kubo in view of Polan (U.S. Patent No. 4,926,946) as applied to claims 1, 10, and 20 above, and further in view of Polan (U.S. Patent No. 5,038,616).

Kubo teaches all the limitations of the claims except for a cover member couple to the outer surface of the second housing. However, Polan discloses a sprinkler head having a disc head cover 14 with a female screw portion or rib 78/80 for coupling to the outer surface of the second housing. Therefore, it would have been obvious to one having ordinary skill in the art to have provided the device of Kubo with a cover member couple to the outer surface of the second housing as suggested by Polan. Doing so would provide a way to assemble the cover.

With respect to claims 14 and 15, since the limitation "a tool insertion hole" is not positive recited. Therefore the Polan is capable of covering any tool insertion hole.

***Allowable Subject Matter***

6. Claims 2-9, 13, 16, and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

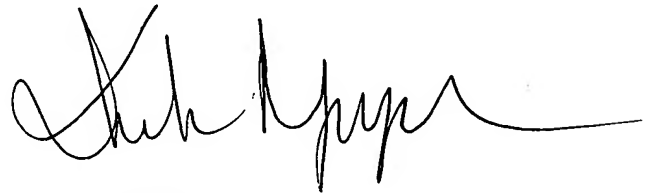
7. Applicant's arguments filed 5/18/06 have been fully considered but they are not persuasive.

8. Applicant's arguments with respect to claims 1, 10-12, 14, 15, 17, 18, and 20 have been considered but are moot in view of the new ground(s) of rejection.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dinh Q. Nguyen whose telephone number is 571-272-4907. The examiner can normally be reached on Monday-Thursday 6:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Scherbel can be reached on 571-272-4919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Dinh Q Nguyen', with a long horizontal flourish extending to the right.

Dinh Q Nguyen  
Primary Examiner  
Art Unit 3752

dqn